

Grade 4

Wendy's Windows

Math Task

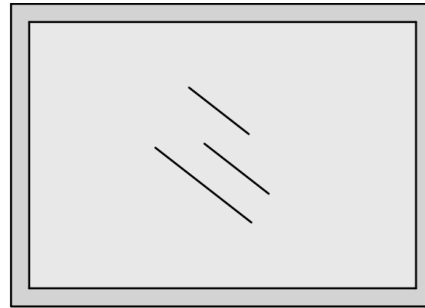
2015-2016 NYC End-of-Year Performance Tasks

Instructions

- Tasks may not be shared with students prior to administration.
- If the above-named NYC Performance Task is being administered for evaluative purposes, the End-of-Year task may be administered by the regular classroom teacher but **may not be scored** by the regular classroom teacher.
- Distribute one task booklet to each student.
- All student work should be completed in the task booklet. All student work in the task booklet should be scored, regardless of whether the student completed or attempted every question.
- Students should have 90 minutes to complete the task, not including the distribution and collection of materials.
- Depending on school scheduling, administration may occur over 1-2 days. Administration conditions (i.e., the amount of time students have to complete the task, etc.) should be consistent across all classrooms in the school administering the above-named NYC Performance Task.
- Students should receive all accommodations normally provided for a class or state test.
- For complete administration information, see the MOSL Assessment Administration Handbook.

Wendy's Windows

Wendy has just started a new business making windows for houses. The homeowner tells Wendy the measurements of the window, and she makes the glass and the frame. Wendy has decided that she should keep track of the measurements for each window she makes.



Wendy has started a table with some of the sizes of the windows she makes, but the table is incomplete.

Window Sizes

Window	Length	Width	Area	Perimeter
A	2 feet	4 feet	8 square feet	12 feet
B			96 square feet	40 feet
C		8 feet	144 square feet	
D	6 feet	8 feet	48 square feet	28 feet

1 Compare Window A (2 feet by 4 feet) and Window D (6 feet by 8 feet):

How much longer is the perimeter of the larger window? _____ feet longer

How many times larger is the area of the larger window? _____ times larger

Name: _____ Date: _____

Window Sizes

Window	Length	Width	Area	Perimeter
A	2 feet	4 feet	8 square feet	12 feet
B			96 square feet	40 feet
C		8 feet	144 square feet	
D	6 feet	8 feet	48 square feet	28 feet

- 2 What is the length of Window C?

_____ feet

Show your work.

- 3 What is the length and width of the window with the 96 square foot area?

Length: _____ feet

Width: _____ feet

Show your work.

Name: _____ Date: _____

- 4 What is the area, in square inches, of a window that is 4 feet long and 54 inches wide?

_____ square inches

Show your work.

Name: _____ Date: _____

One homeowner asked Wendy to make several pairs of small windows for his house. For each pair, the owner would like one window to be square and the other to be one inch longer on one side and one inch shorter on the other side. Wendy makes a table that can be used later to find the cost of the pairs of windows.

- 5a Find the area of each rectangular window for Wendy so her table will be complete. Write your answers in the table.**

Square Windows

Length	Width	Area
9 inches	9 inches	81 square inches
10 inches	10 inches	100 square inches
11 inches	11 inches	121 square inches

Rectangular Windows

Length	Width	Area
8 inches	10 inches	_____ square inches
9 inches	11 inches	_____ square inches
10 inches	12 inches	_____ square inches

- 5b If Wendy makes a square window that measures 23 inches long by 23 inches wide, with an area of 529 square inches, what is the area of the rectangular window that measures 24 inches long by 22 inches wide?**

_____ square inches

- 5c Identify the pattern in the table and explain how you know the area of the rectangular window that measures 24 inches long by 22 inches wide without calculating the actual area.**

Name: _____ **Date:** _____

- 6** When Wendy makes a pair of windows, each window in the pair will be made of different glass. The 8 inch by 8 inch square window has an area of 64 square inches and the glass costs 20¢ for each square inch. The 7 inch by 9 inch rectangular window has an area of 63 square inches and the glass costs 10¢ for each square inch.

What is the total cost of the glass for this pair of windows? _____

Show your work.

Name: _____ **Date:** _____

- 7 Wendy has 290 square feet of glass. She would like to use the glass to make windows that each have an area of 7 square feet. She thinks she can only make 39 windows.**

However, Wendy is incorrect. Use estimation to explain why Wendy's thinking is incorrect.

[illegible]